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ABSTRACT

Three papers on Trade and Industrial Education which were presented at a teacher education leadership conference on the development of common core curriculum for vocational teacher education are contained in this booklet. The title and authors are as follow: "The Followup Workshop," by D. L. Karr; "A Course in Teaching Methods and Techniques," by David Hufford; and "Educational-Industrial Coordination: A Dual Approach," by Don Scott. Each paper generally addresses six primary points of emphasis: (1) need for the proposed course, (2) objectives, (3) content, (4) instructional strategies, (5) evaluation, both formative and summative, and (6) related resources. (JH)

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Topic Analysis for Vocational Teacher Education

Trade and Industrial Education



U.S. DEPARTMENT OF HEALTH,
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Foreword

In recent years, extensive efforts have been exerted from a state vocational education perspective to impact upon the professional staff development of state leadership and local program personnel. Teacher education has been involved in these staff development activities, but formalized efforts which have implication for statewide pre-service and baccalaureate vocational education professional personnel development programs have been limited.

During recent years there have been sweeping institutional reforms for the professional preparation of teachers in Ohio, adopted by the State Board of Education. The resultant institutional restructuring to meet these standards, has replaced the traditional approach of adding or deleting courses for certification as a means of preparing teachers, and are designed to prepare teachers who will possess sound professional knowledge of the learning process, have competencies in the clinical use of sophisticated diagnostic instruments, and possess the ability to work effectively with youth from various social, economic and racial environments.

The primary purpose of the teacher educator conference was to "enhance the effectiveness of vocational education professional personnel development program through the bringing about of an awareness and understanding of teacher education standards and their implication for program redesign, and the review of common core curricula and program criteria for vocational education personnel development." This expressed purpose was met through the combined efforts of many teachers educators and other state staff who designed the program. Special acknowledgement is extended to the teacher educators who prepared, presented, and revised the professional papers which focused on common core curricula for vocational education. During the two and one half day conference, eighty-five teachers educators from various universities across Ohio had the opportunity to react to and critique the written presentations. Each paper addressed six primary points of emphasis: (1) Need for the proposed course (2) Objectives (3) Content (4) Instructional Strategies (5) Evaluation, both formative and summative, and (6) Related resources.

This publication is a product, of the teacher education conference. We are indebted to the various publication authors and to the conference participants for their professional counsel and written critique of the various topical analyses. The concepts and ideas contained in these papers are the sole responsibilities of the authors and are to serve as a basis for discussion and further development.

Pyril R. Shoemaker
Executive Director,
Vocational and Career Education
and School Food Service,
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**Topic Analysis for vocational
Teacher Education**

THE FOLLOW-UP WORKSHOP

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September, 1978

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THE FOLLOW-UP-WORKSHOP

THE NEED FOR THE COURSE

The concept of the topic, The Follow-Up-Workshop, is such that it is not easily defined nor do all of us comprehend its meaning in the same manner. Webster states that the term "Follow-Up" pertains "to renewed or repeated action." My research indicates that the content of our Follow-Up Workshops has not focused on the renewal of instructional practices or repeated actions of prior teaching competencies. It is noted that some of the workshop content may be of the follow-up nature. But by and large, we have been presenting new information and developing additional instructional skills. While the presentation of new teaching skills may be commendable in our preparation of in-service teachers, this practice indicates that we do not have a clear agreement as to what the content and purpose of the Follow-Up-Workshop should be for our non-degree Trade and Industrial teachers.

In my deliberations in dealing with Follow-Up-Workshops, the topic seems to be so ambiguous and unstructured that it has been quite difficult to decide whether to state the topic as "The Follow-Up-Workshop—The State of the Art" or to pursue the topic as "What the Follow-Up-Workshop Should Be!"

The most difficult problem about any discussion of what the Follow-Up-Workshop is or should be rests in the uncertainty of what we think constitutes the nature of this workshop and its dependency on the following:

1. It is only one part of a planned two year program of teacher education.
2. There has been some discussions as to the benefits of the Practical Nursing instructors attending one week of this two week workshop, as well as other concerns as to which topics should be presented to the Nursing Instructors and which should not be presented.
3. It appears that there is little conformity of content among the five teacher education centers as evidenced from the workshop agendas.
4. In the past several years we have had several proposed changes for our total teacher education plan, which if adopted could have a number of implications for the nature and content of the Follow-Up-Workshops.

Historically, the Follow-Up Workshop has been a required element of the two year teacher education program since 1970. The concept of the need for a Follow-Up has changed very little from the original design as a part of the Educational Professional Development Act Project at Kent State University. The success of those early E.P.D.A. Programs at all of our Universities established the new pattern of our present teacher education program. It seems very significant that the then "new" concept of a Follow-Up Workshop was made an integral part of the total teacher education plan for the new non-degree T. and I. teachers. It is self evident that

there is a real need for a Follow-Up Workshop for beginning Trade and Industrial teachers. Most educators would agree that our pre-service and in-service teacher education program would be inadequate without the Follow-Up Workshop beginning to strengthen the basic teaching competencies, to develop curriculum and leadership skills. I think some of us have heard some of our local Directors and Supervisors comment positively on the value of our Follow-Up Workshops and how much better prepared our in-service teachers are for their instructional roles. The teachers themselves often make note of the fact that the Follow-Up Workshop enables them to gain a better perspective of their roles as teachers and provides a self renewal after the confusion and anxiety of their first year of teaching.

The development of a topical outline of the Follow-Up Workshop has had several constraints. Due to vacation schedules and a lack of time, most of the teacher education centers did not provide a recent copy of their syllabus or Content outline for the Workshop. It should also be noted that earlier attempts to identify Workshop content was made at our State Staff Workshop at Shawnee State Park in 1975. The result of that effort established consensus on the content of the Four-Week Pre-Service Workshop but no firm agreement on the Two Week Follow-Up Workshop. Therefore, the Content Outline to be presented has been prepared as objectively as possible even though insufficient data was available to make a comprehensive analysis. The only references the writer found were a few Policy and Planning Notes, the unapproved 1975 proposal and several old Workshop agendas from several teacher educational centers.

The original source document dated December 28, 1972 may be found in the appendix of this paper. As may be seen from this page in 1972, we were concerned with only 15 major topics. By 1975, the proposed content took a new form as depicted in the appendix. You are asked to note that the total content of the workshop topics were reduced by deletion and transferred to other parts of the two-year teacher education program.

The only addition to the proposed content of the Follow-Up Workshop were three small topical areas from the first year In-Service outline.

COURSE OBJECTIVES

The development of instructional objectives for the Follow-Up Workshop must be brief and tentative in nature until such time as we reach consensus on topics to be included in the Workshop outline.

The suggested Instructional Objectives listed have been developed to parallel the major elements of Follow-Up Workshop Content Outline.

Assessment of Student Performance

Attention should be directed to the classification of these instructional objectives into groupings of affective, cognitive, and psychomotor domains.

1. The participant will be able to discuss and make assessments of student performance in both lab and related classes. During the Workshop, the participant will develop both written and performance evaluation devices of an acceptable nature and quality.

2. The participants will demonstrate their ability to plan and revise existing lesson plans. In the process they will: A. Identify behavioral objectives. B. Select teaching techniques. C. Select teaching strategies and develop content of the lesson.

3. Follow-Up Workshop participant will identify and obtain information relative to the educational background of their students, prepare written documents for a course outline as well as other preliminary materials for their course of study. In the process the participant will:

- A. Develop materials such as assignment sheets, charts, and transparencies.
- B. Plan how to involve students in the preparation of instructional materials.
- C. Where appropriate select programmed and individualized instructional materials.
- D. Prepare instructional materials using a spirit duplicator, a mimeograph, and a photocopier.

Plan and Develop Instruction

The participant will plan and structure a course outline for his field of teaching, using the various tools of instruction such as audio-visual, audio-tutorial materials, library resources, tests and measurements, and a variety of community resources, tests and measurements, and a variety of community resources. The participant will design a course outline and in the process be able to:

1. Identify the unit topics for the course.
2. Determine the student needs and goals.
3. Determine the behavioral objectives for the unit.
4. Identify lesson topics for the unit.
5. Write a content outline for the unit.
6. Correlate the unit content with the laboratory or shop experiences.
7. Determine group and individual learning experiences for the unit based on the individual differences of students. Select, or develop, methods of evaluating the student's performance throughout the unit.

The participant will gain teaching competencies by discussion and prac-

tice of various teaching techniques in small group assignments during the workshop. Evaluation of workshop participants achievement shall be made on both a performance and written basis.

The participant will select and/or design appropriate evaluation and measurement instruments or techniques to assess the educational progress of individual students. The participant will evaluate the performance of the individual student. He/she will:

1. Establish criteria for student performance.
2. Formulate a system of grading consistent with the local school policy.
3. Evaluate the student's performance according to standards of the occupation or profession.
4. Evaluate the students' performance according to instructional goals and objectives.
5. Select or devise self-evaluation techniques for use by students.
6. Evaluate individualized directed study.
7. Evaluate the shop experiences of students.

Organization and Management

1. The participant will apply principles of educational management to his instructional resource needs of this course of study.

- A. List the supplies needed to teach a course.
- B. List the equipment needed to teach a course.
- C. Review and select a textbook (if optional) and recommend reference books.

2. The participant will maintain records and an efficient filing system.

- A. Maintain a filing system for records and report forms used in Trade and Industrial Education and be able to supply the administrators with data for reports required by local, state, and federal agencies.
- B. Maintain a filing system for instructional materials.
- C. Maintain occupational information and opportunity data for use by students.
- D. Maintain a file for each student documenting attendance, grades, progress, etc.

3. The participant will learn how to control (manage) student behavior.

- A. Formulate an acceptable standard of behavior in classroom and laboratories or shops.
- B. Uphold acceptable standards of student behavior in classrooms and laboratories or shops.
- C. Encourage students to exercise self-discipline.

4. The participant will maintain the laboratory or shop area and will develop plans to:
 - A. Maintain an inventory of supplies and equipment assigned to the shop area.
 - B. Arrange for storage and security of equipment.
 - C. Schedule equipment for maximum utilization by students.
 - D. Maintain a system or procedure for repairing and servicing equipment.
 - E. Structure check-out procedures for supplies and equipment where necessary.
 - F. Implement a housekeeping system for cleaning and maintaining the shop area.
 - G. Control the environment for an optimum learning situation.

Youth Club Activities

1. The participant will be able to identify and discuss the goals and purpose of the National V.I.C.A. Organization.

Safety

1. The participant will develop a plan to provide for the safety of the students in the classroom, laboratory, and shop.
 - A. Provide approved safety apparel and devices appropriate for the operational field of instruction.
 - B. Establish a procedure for first aid.
 - C. Give safety procedure instructions appropriate to the specific occupational field.
2. The participant will be able to discuss the legal aspects of teacher liability and be knowledgeable of self protection and be familiar with various forms of liability insurance.

Use of Teaching Material

1. The participant will use a variety of instructional media and resources. In the revision of lesson plans:
 - A. Utilize resource persons.
 - B. Effectively use bulletin boards and exhibits to present information.
 - C. Illustrate the lesson by the use of models as well as real objects.
 - D. Effectively present information using such things as an opaque projector, overhead projector, film strips, slides, sound motion pictures, single concept films, audio recorder, flip chart, chalk board and flannel board as appropriate to the speciality.
2. The participant will develop a series of instruction sheets during workshop, suitable as a unit of instruction for the teaching area.

Communications-Human Relations

1. The participants will become more cognizant of the need for better communication. Participants will add to their communication skills via participation in small groups in discussion and sharing of ideas and teaching techniques.

2. Participants will demonstrate their human relation skills throughout the workshop in practice situations and in response to end-of-course written evaluations.

Leadership Skills

1. The participant will apply the theory of group dynamics by using techniques such as group work, group discussions, panel discussions, and buzz sessions during the two week workshop.

2. Given a set of techniques for problem solving and decision making the participant will practice the utilization of such techniques in the workshop environment where such needs exist.

Vocational Development and Organizations

1. The participant will be able to discuss and identify the various teacher certification requirements and submit a written plan of his or her teacher certification goals.

2. Given a state and local organization chart of Vocational educational services, the participant will be able to identify and discuss the functions of the various vocational services and their relationship to their own program of instruction.

3. The participant will have knowledge of the various vocational educational professional organizations and be able to correctly respond to ninety percent of the written questions on professional organization.

COURSE OUTLINE

This outline is a composite of the content as presented at the State Staff Workshop in 1975 by a Committee of Teacher-Educators and the writer's perceptions of the real content as currently practiced by the various Teacher-Education centers. Due to the nature of the Follow-Up Workshop and the absence of a formal approval of the suggested content, coverage of all areas is not required nor is there a specific time allocation for each area. The total number of class hours available for this Workshop is approximately sixty (60) hours.

1. ASSESSMENT OF STUDENT PERFORMANCE

1.1 Identify specific behavioral objectives which the students are unable to master so that said objectives can be modified.

1.11 Related class

1.12 Laboratory class

1.21 Math required for first lesson

1.22 Color - Vision

1.23 Basic tool identification

1.24 Basic information on first unit

1.25 Administer for itinerant teacher assistance on first visit

1.3 Review Instructional Objectives developed during first year of teaching

1.31 Rewrite inadequately stated objectives

1.32 Rewrite poorly stated test items

1.33 Develop additional test items as needed

1.34 Rewrite poorly stated performance tests as needed

1.35 Develop additional performance tests as needed

1.40 Review the first year lesson plans

1.41 Sequence lesson plans in logical teaching order

1.42 Refine teaching content as identified from Task Analysis

1.421 Importance of content or skill

1.422 Personal care and safety information

1.423 Student decision for correct performance of skill

2. PLAN AND DEVELOP INSTRUCTION

(Preliminary preparation for Course of Study)

2.1 Prepare written description of entering student

2.12 Educational background of student

2.121 Areas of school interest

2.122 Level of reading comprehension

2.123 Ability to do required math functions of the occupation

2.13 Motivation of student

2.121 Self-concept

2.132 Self-esteem

2.141 Community

2.142 Church

2.143 Social

2.144 Career

2.15 Attitude toward the occupational area

2.16 Bias

2.17 Prejudice

- 2.2 Identify by testing what the student is supposed to be able to do by the end of the school year (Job Description).
 - 2.21 Awareness of
 - 2.22 Knowledge About
 - 2.23 Skills Developed for
- 2.3 Develop a plan for involving others in planning your instructional materials
 - 2.31 Students
 - 2.32 Follow up of graduates
 - 2.33 Early placement employers
 - 2.34 Craft advisory committee members
- 2.4 Identify sources of professional assistance to obtain instructional materials
- 2.5 List additional instructional materials to be purchased by the school
 - 2.51 Develop an awareness of I.M.L. Task Analysis Contest Organization
 - 2.51 Incorporate available analysis information into the existing local program
 - 2.53 Develop an occupational analysis using the I.M.L. Model
- 2.6 Identify instructional materials for students who need special attention
 - 2.61 Special devices
 - 2.62 Special materials
 - 2.63 Seating arrangements
 - 2.64 Other needs
- 2.7 Identify learning strategies to assist students with unusual learning
- 2.8 Reinforcement of teaching techniques
 - 2.81 The teacher will be able to discuss and use teaching techniques
 - 2.811 Illustrated talk
 - 2.812 Problem solving
 - 2.813 Demonstration
 - 2.814 Use of questions
 - 2.815 Group discussion
 - 2.816 Individual instruction
- 2.9 The teacher will be able to discuss grading systems
 - 2.91 Laboratory
 - 2.92 Participation
 - 2.93 Progress chart
 - 2.94 Performance test
 - 2.95 Job assignment sheets
 - 2.96 Daily grades
 - 2.97 Attitudes

- 2.91 In the related class
- 2.91 Progress charts
- 2.92 Tests
- 2.93 Quizzes
- 2.94 Participation
- 2.95 Notebooks
- 2.96 Workbooks
- 2.97 Written reports
- 2.98 Oral Reports
- 3. Organization and Management
 - 3.1 Identify positive attitudes
 - 3.2 Identify elements of personal self concept
 - 3.3 Application of
 - 3.01 Modeling
 - 3.32 Token reinforcement
 - 3.33 Grade contracting
 - 3.2 Discuss methods of reducing disciplinary problems. Students rights and responsibilities in the classroom
 - 3.33 Classroom behavior policy
 - 3.3 Discuss teacher check-in/check-out control of
 - 3.31 Supplies
 - 3.32 Materials
 - 3.33 Tools
 - 3.34 Instruments
- 4. The teacher will be able to discuss the purpose and values of VICA
 - 4.1 Identify goals of the VICA Chapter at your school
 - 4.2 Participate as a local leader in:
 - 4.21 Local level programs
 - 4.22 Regional level programs
 - 4.23 State level programs
 - 4.3 Participate in the Fall VICA planning session
 - 4.4 Participate in the Spring VICA contests
- 5. Safety and Teacher Liability

The teacher will be able to:

 - 5.1 Discuss the legal aspects of teacher liability
 - 5.11 Significance of liability
 - 5.12 Elements of liability
 - 5.13 Nature and extent of liability
 - 5.14 Use of safety test instruments
 - 5.15 Consequences of liability
 - 5.16 Liability of insurance
 - 5.2 Discuss OSHA and Ohio Industrial Safety Commission policies as related to shop equipment and safety

related to shop equipment and safety

5.21 Safety components

5.22 Safety behavior checklist/test

5.23 Safety Checklist/test

5.231 Handtool category

5.232 Power tool category

Student Injury

5.241 minor

5.242 serious

5.25 Accident reports

5.26 Emergency evacuation plan

5.261 related class

5.262 laboratory

5.27 Safety apparel and devices

5.28 Eye protection and procedures

6. Development and use of teacher materials

6.1 Use of visual aids

6.11 Teacher made materials

6.12 Video tape recorder

6.2 Instruction sheet development

6.21 Lab/Procedure/Task Sheet

6.22 Operation/Step Sheet

6.23 Procedure Plan Sheet

6.24 Information Sheet

6.25 Assignment Sheet

7. Communications — Human Relations

7.1 Communications between teachers

7.11 Sharing of ideas, teaching techniques (show & tell)

7.12 Sharing of problems in teaching

7.121 Working with supervisors

7.122 Adopting to educational changes in mainstreaming, desegregating, etc.

7.2 Using human relations skills

7.21 Value systems

7.22 Non-verbal communications

7.23 Behavior modifications

7.24 Participation in small groups

8. Leadership skills

8.1 The Teacher will be able to discuss and use leadership techniques

8.11 The conference method

8.12 Problem solving

8.13 The buzz group

9. Professional Development

The teacher will be able to:

- 9.1 Discuss state certification policies
- 9.11 One-year Vocational Certificates
- 9.12 Four-year Provisional Certificates
- 9.13 Eight-year renewal requirements
- 9.2 Discuss the Ohio State Department of Education, Division of Vocational Education
 - 9.21 Personnel organization chart
 - 9.22 Services rendered
- 9.3 Discuss University Faculty for Vocational Education
 - 9.31 Faculty personnel organization chart
 - 9.32 Services rendered
 - 9.33 Relationship to the State Department of Education, Division of Vocational Education
- 9.4 Discuss university T & I teacher education plan
 - 9.41 Two-year in-service program
 - 9.42 Bachelors degree program
- 9.5 Discuss professional teacher organizations
 - 9.51 American Vocational Association, Inc.
 - 9.52 Ohio Vocational Association
 - 9.53 Other teacher organizations

You are requested to remember that the Workshop outline presented is a composite of what is being taught in the two week Follow-Up Workshop. None of our teacher education centers are using all nine major elements of content identified in the workshop outline and there is probably little conformity in the depth of coverage for these elements or topics. My research indicates that some of the major elements identified are allocated only an hour or 90 minutes in some workshop agendas, while other topics may be allocated anywhere from six to eighteen hours of the workshop agenda. Therefore, major content heading and the details of the outline for sub-parts will not show any relationship to the amount of time actually devoted to that topic. The sequence of the major elements of the workshop content has not been structured. Some thought is to be given to the proper sequence of topics as at present there does not appear to be any specific order or particular preference of arrangement.

It is a matter of record that a number of our teacher education centers changed the content of this workshop yearly to match the needs of their participants. The practice of tailor-making curriculum for our students is an old and established tradition in Trade and Industrial Education, but perhaps there are some hazards in this practice if there are no guidelines or required areas to be covered.

One sample of the manner in which content selection has been made is presented in the appendix.

Perhaps one of the most significant outcomes of this Conference will be a move towards some uniformity in the content of the two week Follow-Up Workshop.

Recommendations

In the development of the suggested Two Week Follow-Up Workshop proposed content there are a number of other considerations that have come to my attention. These ideas are to be thought of as changes in our own instructional practices and not additional content for the Workshop outline.

In the past seven years, at some of the teacher education centers, the major emphasis of the Follow-Up Workshop has focused on two major areas.

1. Occupational analysis (preparation for course of study construction).
2. The leadership skills of teachers.

It would appear now that some consideration for a change in emphasis is in order with the availability of occupational analysis from our Instructional Materials Laboratory.

Is it a necessity to still have everyone go through the steps of making an analysis? I think not, and would propose more individualized instruction as part of our Two Week Follow-Up Workshop. In keeping with the concept of the term "Follow-Up" presented earlier, perhaps we would perform a better teacher education service if we were to use more performance based instruction in this workshop.

For Example, if we find a number of teachers who have occupational analyses available in their instructional areas, why have them develop another analysis? Would it not be better to put them on an individualized assignment to work on those teaching competencies they need to improve.

Whether we make a change from the two year teacher education plan or not, it might be advisable to have (two) one week Follow-Up Workshops at the end of the first and the second year of teaching. It is obvious to most of us that our instructors are so engrossed in completing their course of study during the second year that they do not devote much time to the actual improvement of their teaching skills.

When the concept of (two) one week Follow-Up Workshops is thought of, it may seem to be anti-climatic. You may suggest that we should move the course of study construction to another year after the second Follow-Up. The need for a Follow-Up after the second year is real. In some cases there is a need to Follow-Up the Instructor's completed course of study.

STRATEGIES FOR INSTRUCTION AND EVALUATION

The suggested instructional and evaluation strategies are as follows:

Assessment of Student Performance

1. Prior to the Follow-Up Workshop all participants are required to complete a survey form which assist in the identification of problems in the assessment of student performance. Using this data a series of presentations and in class activities are designed to measure and assess learner performance. Both formative and summative evaluation techniques are used to measure and assess learner performance. Both formative and summative evaluation techniques are used to measure participant achievement.

Plan and Development Instruction

1. Instructional strategies for the development of preliminary materials of course of study construction will be effected via the development of materials for a course outline to be submitted at the completion of the workshop. Said materials will be subject to both formative and summative evaluation.

2. Guest speakers and experts in the areas of Special needs and disadvantaged youth are used to supplement other instructional strategies in the planning and development of instruction. Formative evaluation of an oral nature in small group discussion is used as the primary evaluation device.

Organization and Management

1. Instructional strategies to present management and organizational activities are implemented through the use of guest speaker presentations on "Working with Supervisors, Discipline Practices, etc." Summative evaluation is used in a Workshop post-test.

Youth Club Activities

1. Instructional strategies for presentation of information and motivation of participants to become active in V.I.C.A., advisors is achieved through teacher education presentation and the use of V.I.C.A. films during the Workshop. No formative or summative evaluations are made.

Safety and Teacher Liability

1. Instructional strategies of this topic are achieved via teacher educator presentations and group discussions along with the development of communication skills practice in the workshop. Both formative and summative evaluations are used.

Development of Teacher Materials

1. The development of a Curriculum package for one unit of Instruction is the major trust for this instructional strategy. On-going formative and summative evaluations are used during the workshop.

Communication—Human Relations

Instructional strategies for communication and human relations are an integral part of all workshop activities.

1. Primary emphasis on planned small group discussions on "Sharing" of ideas" and "working effectively with others" are the focal points. No specific evaluation is made.

Leadership Skills

1. The instructional strategy used in the area of leadership skills is to provide the participants with the opportunity to practice these skills following presentation by teacher educators and in the preparation of written instructional materials. Summative evaluation is used in connection with the end-of-course curriculum package.

Professional Development

1. Vocational Development and Organization, instructional strategies are to utilize guest speakers for presentation designed to impart information to motivate the participants to become more knowledgeable and to become actively involved in the various organizations. Due to the nature of the content and the brevity of the Workshop no evaluation is made in this area.

RECOMMENDATIONS

It is recommended that a study and possible revision of the fifteen general objectives for Trade and Industrial Education be made in the very near future. Those objectives as identified in June of 1973, need to be reviewed and allocated to specific phases or portions of our teacher education plan. These fifteen objectives as originally stated are presented below.

Fifteen general objectives for T & I teacher education were identified as follows:

1. Develop teacher self confidence.
2. Develop the ability to recognize individual differences.
3. Acquaint the new teacher with the philosophies, objectives and organization of academic and vocational education.
4. Develop methods of evaluation.
5. Develop organization of materials, equipment and course content.

6. Develop the competence of the teacher in using various teaching techniques in conducting related and laboratory classes.
7. Develop competence in the organization and management of laboratory and related class.
8. Help teachers to understand and control students in the learning situation.
9. Instill an attitude of professionalism in the teacher.
10. Develop a desire for self-improvement.
11. Assist the teacher in the development of craftsmanship, workmanship and positive self image in the student.
12. Stress the importance of safety education.
13. Develop a recognition of teacher responsibility and liability.
14. Develop an awareness of teacher education and certification requirements.
15. Develop an awareness of school, community and industrial relations.

If there appears to be sufficient interest to restructure the length of time for the two week workshop into (two) one week workshops or to add a (third) one week workshop to the present two week workshop it would be advisable to obtain teacher input prior to making any substantial changes.

APPENDIX

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TOPICS — FOR TWO WEEK FOLLOW-UP WORKSHOP

Small Group 1

12-28-72

Marion

1. Show & Tell — or — Bring & Brag — Session
2. Test Construction (Toledo-2 weeks)-includes Developing 80 Item Test.
3. Visual Aids-Additional Depth?
4. Occupational Analysis?
5. Behavioral Objectives
6. Value Systems Orientation
7. Non-Verbal Communication
8. Behavior Modification Techniques
9. Leadership skills
10. Human Relations
11. Class & Student Behavior (Case studies)
12. Certification
13. Innovations-and-Accountability
14. Advisory Committees?
15. VICA?

Committee Recommendation—

Course of Study Requirements be moved into the 4 year interval following issuance date of the first standard certificate.

Committee:

Don Garrison—V.C.—Chairman
Jim Heller—Kent
Henry Pucilowski—Toledo
Carl Gorman—Kent
Dick Outcalt—V.C.—Recorder
Submitted by: Dick Outcalt

PROPOSED 2nd WEEK FOLLOW-UP WORKSHOP

**June, 1975
State Department Workshop**

1. ASSESSMENT OF STUDENT PERFORMANTION

- 1.1 Review objectives identified in 575-B (DURING 9 MONTHS IN-SERVICE)**
 - 1.11 Rewrite broadly stated objectives (INADEQUATE)**
 - 1.12 Rewrite broadly worded test items (POORLY STATED)**
 - 1.13 Rewrite test items which do not reflect the intent of specific behavioral objectives**
- 1.2 Review the first year's lesson plans**
 - 1.21 Sequence lesson plans into a logical TEACHING order**
 - 1.22 Refine teaching content (AS IDENTIFIED BY IML OCCUPATIONAL ANALYSIS)**
 - 1.221 Importance of content or skill**
 - 1.222 When is the skill used**
 - 1.223 Personal care and safety information**
 - 1.224 Decisions which the student must make in-order-to-perform the skill correctly.**
 - 1.23 Develop instructional modules for the first five major subject divisions of your unit(s), by first teacher-educator visit in Fall**
 - 1.231 Introduction**
 - 1.232 Pre-test**
 - 1.233 Glossary of new terms to be used in this module**
 - 1.234 Specific behavioral objectives to be learned in this sub-unit or unit**
 - 1.235 Assigned readings**
 - 1.236 Post-test**
 - 1.237 Assignment sheets**
 - 1.238 Information sheet(s)**

2. PLAN AND DEVELOP INSTRUCTION

- 2.1 Develop a plan for involving others in planning your instructional materials**
 - 2.11 Student (ADD FOLLOW-UP OF GRADUATES)**
 - 2.12 Early placement employers**
 - 2.13 Lay-advisory committee members CRAFT (SOURCES OF ASSISTANCE)**
- 2.2 Identify instructional materials which others can assist you in developing by first visit of teacher educator in Fall**

ADDITIONAL

- 2.3 List instructional materials for the school library to purchase by August 1, forward to your teacher-educator by mail
- 2.4 Obtain a copy of your school's philosophy by the first visit of the teacher-educator in fall
- 2.5 Write your personal philosophy of education
- 2.6 Write a comprehensive description of your:
 - 2.61 School
 - 2.62 Sending communities
- 2.7 Refine the technique of producing a comprehensive description of your students
- 2.8 Identify materials to be placed in your course of study
 - 2.81 Title page
 - 2.82 Acknowledgements
 - 2.83 Preface
 - 2.84 Table of contents
 - 2.85 School's philosophy
 - 2.86 Personal philosophy of education
 - 2.87 Descriptions of
 - 2.871 Student
 - 2.872 School
 - 2.873 Sending communities
 - 2.874 Student brochure
 - 2.88 Zone analysis
 - 2.881 Course title
 - 2.882 Units
 - 2.883 Unit sub-divisions and modules
 - 2.884 Lesson plan(s)
 - 2.89 Course goals
 - 2.810 Unit goals
 - 2.811 Instructional module(s) for unit
 - 2.812 Lesson plan(s)
 - 2.813 Evaluation instruments for
 - 2.8131 Lesson plan
 - 2.8132 Unit sub-division
 - 2.8133 Unit
 - 2.814 Safety materials
 - 2.815 Safety tests for
 - 2.8141 General behavior
 - 2.8142 Tool category
 - 2.816 Plan of instructional
 - 2.817 Materials for a substitute teacher

- 2.818 Provisions for individualized instruction of students with special needs.
- 2.819 Bibliography
- 2.9 Identify instructional materials for students with special needs (WHO NEED SPECIAL ATTENTION)
 - 2.91 DEVICES
 - 2.92 MATERIALS
 - 2.93 SEATING ARRANGEMENT
 - 2.94 OTHER
- 2.10 Identify learning strategies to assist students with special needs (LEARNING DIFFICULTIES)
- 3. ORGANIZATION AND MANAGEMENT OF VOCATIONAL TECHNICAL PROGRAMS
 - 3.1 Write purchase requests for
 - 3.11 Supplemental equipment purchases
 - 3.12 Consumable supplies
 - 3.13 Minor tool or equipment purchases
 - 3.2 Refine the techniques of taking inventory
 - 3.21 Tools
 - 3.22 Instruments
 - 3.23 Equipment
 - 3.24 Supplies
 - 3.25 Textbooks
 - 3.26 Resource materials
 - 3.27 Furniture
- REVIEW AND DISCUSS
- 3.3 Write sample professional quality communications
 - 3.31 Memos
 - 3.32 Recommendations for student employment
 - 3.33 Letter of inquiry
 - 3.34 Letters requesting materials
- 3.4 Identify PROMOTIONAL materials to be used in a prospective student's brochure
- 3.5 IDENTIFY MATERIALS TO BE USED IN A STUDENT POLICY HANDBOOK
- 4. VICA
 - 4.1 Identify state VICA goals
 - 4.2 Name state level VICA programs
 - 4.3 Name regional level VICA programs
 - 4.4 State the purposes of VICA IDENTIFY DISTRICT LEVEL VICA ACTIVITIES

5. BEHAVIOR MANAGEMENT

- 5.1 Identify positive attitudes
- 5.2 Identify elements of personal self-concept
- 5.3 Application of
 - 5.31 Modeling
 - 5.32 Token reinforcement
 - 5.33 Contracting GRADE CONTRACTING

6. PROFESSIONAL DEVELOPMENT

- 6.1 PARTICIPATION
- 6.2 PROFESSIONAL MEMBERSHIP
- 6.3 PROFESSIONAL ETHICS
- 6.4 MAINTAINING OCCUPATIONAL SKILLS
- 6.5 UPGRADING TEACHING COMPETENCIES

PROPOSED

1st Year T & I In-Service Program

1. ASSESSMENT OF STUDENT PERFORMANCE

- 1.1 From the specific behavioral objectives in your lesson plan construct:
 - 1.11 Paper and pencil tests using:
 - 1.111 multiple-choice items
 - 1.112 true-false questions
 - 1.113 completion questions
 - 1.114 matching questions
 - 1.115 listing questions
 - 1.116 case study questions
 - 1.117 problem solving questions
 - 1.12 Problem solving skill tests
- 1.2 Identify specific behavioral objectives which need to be reviewed:
 - 1.21 perform an item analysis
 - 1.22 identify poor test item (s) according to item analysis
 - 1.23 show that the overall score reflects adjustment of poor test items
 - 1.24 no test specific behavioral objectives reviewed
- 1.3 Identify specific behavioral objectives which the students are unable to master so that said objectives can be modified
 - 1.31 related class
 - 1.32 laboratory class
- 1.4 Determine student's grade according to mastery of specific behavioral objectives
- 1.5 Use a justifiable specific behavioral objective based
- 1.6 Post student progress chart

1.7 Up-date objective 1.6 weekly

2. PLAN AND DEVELOP INSTRUCTION

2.1 Prepare a written description of entering student:

- 2.11 Physical characteristics
 - 2.111 sex
 - 2.112 age
- 2.12 Educational background to/C
 - 2.121 area(s) of school interest
 - 2.122 ability to read
 - 2.123 ability to do math problems related to your occupational area
- 2.13 Motivation
 - 2.131 self-concept
 - 2.132 self-esteem
- 2.14 Interests
 - 2.141 community
 - 2.142 church
 - 2.143 social
 - 2.144 professional or career
- 2.15 Attitude toward the occupational area
- 2.16 Bias
- 2.17 Prejudice

2.2 Identify by listing what the student is supposed to be able to do at the end of the school year in broad-general statements (goals) by October 1.

- 2.21 Awareness of
- 2.22 Knowledge about
- 2.23 Skills developed for

2.3 Identify specific lesson topics to be mastered for each lesson plan with in the unit(s) to be covered before the next teacher-educator visitation.

- 2.31 Sequence specific behavioral objectives from simple to complex
- 2.32 Sequence skill activities from simple to complex
- 2.33 Identify specific safety instruction to be provided

2.4 Select an appropriate method of presenting a lesson for teaching-educator evaluation.

2.5 Prepare appropriate instructional material(s) to supplement and/or complement the lesson presentations as identified by objective 2.3

- 2.51 Job/sheet procedure
- 2.52 Information sheet
- 2.53 Job procedure plan sheet format with assignment
- 2.54 Assignment sheets
- 2.55 Operation sheets/steps

TWO WEEK FOLLOW-UP WORKSHOP 19_____

Participant Questionnaire

To more effectively plan this year's two week follow-up workshop, we are asking you to rate each of the following items. Check "1" if you think the item should *not* be included. Check "2" if you think the item *should* be included. Check "3" if you think the item *must* be included.

1. To develop student attitudes toward safety practices and safety-consciousness in job performance. 1__ 2__ 3__
2. To stimulate and maintain interest throughout the instructional process. 1__ 2__ 3__
3. To assist students in identifying and solving problems. 1__ 2__ 3__
4. To recognize the individual differences in physical, mental, and social traits of each student and make provisions for them. 1__ 2__ 3__
5. To establish and maintain acceptable standards of discipline. 1__, 2__ 3__
6. To develop student attitudes for the care and conservation of equipment and materials. 1__ 2__ 3__
7. To motivate students to acquire skill and knowledge. 1__ 2__ 3__
8. To interview and counsel a student. 1__ 2__ 3__
9. To demonstrate the skills of the trade. 1__ 2__ 3__
10. To combine jobs, operations, and related information into a course of study. 1__ 2__ 3__
11. To analyze a trade for its related information. 1__ 2__ 3__
12. To advise VICA and other student activities. 1__ 2__ 3__
13. To select and use instruction materials and references suited to the student's level and interest. 1__ 2__ 3__
14. To analyze a trade for its basic operations. 1__ 2__ 3__
15. To construct objective tests to measure student's achievement. 1__ 2__ 3__

16. To devise procedures for the evaluation of students. 1__ 2__ 3__
17. To work effectively with supervisors and administrators. 1__ 2__ 3__
18. To work as a member of a professional team in planning a suitable educational program for the vocational student. 1__ 2__ 3__
19. To formulate and support a philosophy of vocational education. 1__ 2__ 3__
20. To organize an effective program of placement and follow-up for students. 1__ 2__ 3__
21. To effectively express a point of view orally or in writing. 1__ 2__ 3__
22. To use a wide range of techniques, materials, and methods in teaching. 1__ 2__ 3__
23. To utilize effective questioning as a teaching tool. 1__ 2__ 3__
24. To prepare a workable lesson plan. 1__ 2__ 3__
25. To prepare job and operation sheets. 1__ 2__ 3__
26. To prepare assignment sheets. 1__ 2__ 3__
27. To prepare information sheets. 1__ 2__ 3__
28. To teach related information and/or manipulative operations using the four-step plan of instruction. 1__ 2__ 3__
29. To lead a group discussion. 1__ 2__ 3__
30. To utilize audio-visual aids effectively in the shop or classroom. 1__ 2__ 3__
31. To solicit the support of and use a wide range of community resources, both human and material. 1__ 2__ 3__
32. To maintain progress charts and records of individual student achievement. 1__ 2__ 3__
33. To organize procedures for the maintenance of tools and equipment. 1__ 2__ 3__
34. To select and order materials, supplies, and equipment. 1__ 2__ 3__
35. To maintain proper laboratory records and accounts. 1__ 2__ 3__

36. To prepare and submit objective reports. 1__ 2__ 3__
37. Methods and/or techniques of teaching related information. 1__ 2__ 3__
38. Good housekeeping practices applied to the school, shop and classroom. 1__ 2__ 3__
39. The mechanics of class organization and student personnel management. 1__ 2__ 3__
40. The principles of learning applied to teaching trade and industrial subjects. 1__ 2__ 3__
41. The principles of individual differences in the learning process. 1__ 2__ 3__
42. The principles of human relations applied to student, faculty, and community relations. 1__ 2__ 3__
43. The procedures to be followed in developing a curriculum in trade and industrial education. 1__ 2__ 3__
44. Procedures for evaluating and recording student achievement. 1__ 2__ 3__
45. Principles of school shop management. 1__ 2__ 3__
46. The responsibility of the vocational teacher in the guidance program. 1__ 2__ 3__
47. The role of advisory committees in developing programs of trade and industrial education. 1__ 2__ 3__
48. The State Certification requirements for trade and industrial teachers. 1__ 2__ 3__
49. Cleveland State University credit for trade and industrial teachers. 1__ 2__ 3__
50. The professional groups in vocational education and the services they provide at the national, state, and local levels. 1__ 2__ 3__
51. Federal, State, and local laws pertaining to vocational trade and industrial education. 1__ 2__ 3__
52. To prepare lab and classroom policy handbook. 1__ 2__ 3__
53. To share effective techniques and ideas with other instructors in your trade or occupation. 1__ 2__ 3__
54. Supplementary readings for self-improvement. 1__ 2__ 3__

55. Other suggestions for topics.

1__ 2__ 3__

FREQUENCY CHART OF TWO WEEK FOLLOW-UP WORKSHOP CONTENT

Prepared from proposed content topics in 1972 and 1975 and several teacher education workshop agendas

	PROPOSED TOPICS	PROPOSED TOPICS	TOPICS FROM AGENDAS AT:				
	MARION, 1972	SHAWNEE, 1975	C.S.U.	K.S.U.	O.S.U.	T.U.	U.C.
1.	Show & Tell/Sharing		X	X			X
2.	Test Construction	Test Construction	X				X
3.	Visual Aids — Additional Depth	Visual Aids					X
4.	Occupational Analysis	Analysis/Course Outline	X	X	X	X	X
5.	Behavioral Objectives	Behavioral Objectives	X				X
6.	Value Systems Orientation						
7.	Non-Verbal Communications						
8.	Behavior Modification	Discipline	X				X
9.	Leadership Skills		X	X			
10.	Human Relations		X	X		X	X
11.	Class and Student Behavior		X	X			X
12.	Certification	Certification/Philos. Voc. Ed.	X	X			
13.	Innovation-and Accountability		X				X
14.	Advisory Committees?						
15.	VICA?	VICA	X	X			X

OTHER TOPICS IDENTIFIED AT ONE OR TWO CENTERS ARE: Problems in teaching, Teaching techniques, Lab management, Lesson planning, Instruction sheet development, Book reports, College and state vocational organization, Selection of instructional materials using community resources.

**Topic Analysis for Vocational
Teacher Education**

**A COURSE IN
TEACHING METHODS AND TECHNIQUES**

prepared by

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TEACHING METHODS AND TECHNIQUES

INTRODUCTION

The course described in this paper is designed to provide vocational trade and industrial teachers with a detailed learning experience in teaching methods and techniques. A side effect of the course and yet one that is just as important is to assist the teachers in improving their self-concept.

Studies have shown that there is a correlation between what a person thinks of himself/herself, and his/her abilities and performance on the job. A teacher who has entered the teaching profession via the trade and industrial education seven years experience route enters it with much enthusiasm but, at the same time, with much apprehension. Teachers must build on their knowledge and enthusiasm and lose their apprehension by improving their self-concept to become effective. Teachers need to feel "at ease" and comfortable with the activities of teaching. They need to feel confident that they can provide a profitable learning experience for the students.

The writer feels there is evidence that points to a direct relationship between methods used in teaching a lesson and the learning that occurs during the lesson. The method used must "fit" the lesson for it to be an effective learning experience for the student.

A thorough knowledge of teaching methods and techniques along with practical experience is the suggested curricula to provide the beginning, intermediate and experienced vocational trade and industrial teacher with the tools and improved self-concept needed to be an effective teacher.

RATIONALE

The procedure of hiring skilled craftsmen to teach Ohio Vocational Trade and Industrial Education has many advantages. One of the most important is that craftsmen have had actual experience on the job and in many cases ownership and/or management experience.

Another advantage is that craftsmen have had experience in planning. They have had to plan their jobs, cost of jobs, personnel needed to accomplish the jobs, and many other facets of job planning. The teacher education process needs to build on the planning skills of the craftsmen and put them to positive use in the teaching process.

The development of a course in teaching methods and techniques is of vital importance to the trade person entering the teaching profession. During the preservice workshop the beginning teacher is introduced to lesson plans and the necessity of using them. Various methods and techniques are introduced, but an in depth study of each is needed to make them a conscious part of the teacher's instructional process.

The process the skilled worker uses to approach and complete one's tasks is similar to what the teacher accomplishes when preparing to teach a lesson. An analogy may be drawn between the skilled worker and the teacher. The teacher's approach to teaching a lesson is the same as the skilled worker's approach to his task.

Given a task to perform, the skilled worker begins by analyzing the entire scope of the work before committing his time and labor. There are many items pertaining to the completion of the task which the skilled worker accomplishes, some automatically and some by analyzing step by step. As the skilled worker becomes more experienced less time is spent in planning. The teacher will also spend less preparation time as skills are acquired in the profession. But, the fact remains, for each task to be accomplished and each lesson to be taught a detailed plan must be made. The skilled worker will see the results of the planning in the finished product. The teacher will see the planning results in the well trained entry level student.

As the skilled worker thinks through the tasks, the teacher must visualize the lesson. One needs to determine the difficult parts of the lesson to teach and the parts of the lesson the student will have difficulty in learning. The teacher needs to look at the lesson from both sides, that of the learner and of the teacher. One needs to ascertain the overall scope of the lesson before the student is introduced to it. In the same way that the skilled worker goes about the task determining what needs to be done, the teacher needs to analyze the lesson.

A skilled worker must determine the availability of the tools and equipment necessary to complete the task. The teacher needs to decide the items needed to accomplish the lesson. One must decide if a simulated situation will provide the training or if an actual experience is necessary. In either case, the teacher must determine what tools, equipment, visual aids or other items are available and needed to get the lesson across to the student in the best manner.

Time used well by the skilled worker is money in the pocket. Time to the student, if used in constructive learning, can be considered as future earning power. The teacher must be sure the lesson and the application practice time is used constructively by the student.

The skilled worker must satisfy the employer. Each person who looks at the skilled worker's performance is going to appraise it differently. The teacher has 15 to 25 students who each see the instruction from a different aspect. One must be able to select from the various teaching methods and techniques those which will meet the many differences in learning abilities of the students.

As the skilled worker determines the best and most economical way to perform the task the teacher determines the most advantageous way of getting the lesson across to each student. Each learning situation presents

its own unique circumstances. The teacher must be skilled with methods and be able to select the one or combine several to present the material in a manner the student will best understand. Seldom will one method be used exclusively during a given class session. The teacher also needs to develop techniques of presenting the material in an interesting and effective manner which will motivate the student. The atmosphere the teacher, supervisor and administrator establish must be conducive to learning. The skill or technique of providing that atmosphere is very important to the learning experiences of the student.

At this point the difference between a method and technique should be explained. Instructional methods are the orderly procedures that direct learners in developing skills and habits and assist them in acquiring knowledge and attitudes.

An example of choosing the most effective method to use when teaching a lesson would be the auto mechanics teacher who has the task of teaching carburetor systems. Should the teacher lecture, demonstrate, hold a discussion, assign research, or have the student learn through experimenting? Similar decisions must be made by the cosmetology teacher when teaching how to do a pin curl or the welding teacher when teaching how to do a vertical butt weld.

Teaching techniques are the practices and refinements of presentation which a teacher employs to make instruction more effective when using a specific method or a teaching aid.¹

Using the example of the auto mechanics teacher who is teaching the systems of the carburetor; if the teacher decides the lesson should be taught as a related lesson, the teacher must decide which technique is to be used — chalk board, transparencies, or an actual carburetor. In the example of the cosmetology teacher instructing on how to do a pin curl, one might use specific directions to explain and show how the operation is to be performed. The teacher might first demonstrate and during the demonstration may use flip charts or transparencies to illustrate and emphasize each step.

Teaching methods require study, patience, and practice to become a part of the personality and conscious being of the teacher. To tighten a threaded fitting, a plumber selects a suitable wrench. To bring about a particular behavior change on the part of the student, the teacher needs a complete set of available teaching tools. If students were as standardized as threaded fittings, the selection of teaching methods would require little study. Since students are all different in their attitudes and their abilities to learn, an appropriate method of teaching a concept for one may be inadequate for another.

¹G. Harold Silvius and Estell M. Curry, *Teaching Successfully in Industrial Education* (Bloomington, Illinois: McKnight & McKnight, 1967), p. 6.

It has long been recognized that the teacher needs the proper tools for each lesson. It must further be emphasized that a good understanding and a degree of skill in using teaching tools and equipment is necessary for an outstanding performance. A skilled worker knows what equipment is necessary and what tools to select for a particular purpose. The vocational teacher is in a similar position and should have a variety of teaching methods to choose from. The effective teacher, knows which methods to use for a particular situation.

OBJECTIVES OF THE COURSE

Given the rationale, training and the time to develop the various teaching methods and techniques, the vocational teacher will by the end of the course:

1. Identify, explain and describe the role of the teacher in an effective student learning experience.
2. Identify and explain the methods of motivating students and the role of the student in learning.
3. Identify and describe the characteristics of an effective lesson.
4. List the steps in planning a lesson.
5. Explain the process of selecting the teaching method for a lesson.
6. Identify and describe and demonstrate the methods used in teaching related and manipulative lessons to a group of students or to the individual student.
7. Identify, describe and demonstrate the use of teaching techniques.
8. Demonstrate the effective techniques of using instructional aids.
9. Develop self evaluating procedures for analyzing teaching methods and techniques.

SUGGESTED COURSE OUTLINE

The suggested course outline listed below is not to be determined as complete. It has been divided into five sections for ease of teaching.

A. The Teacher's Role in Teaching

This section is established to review the teaching process and the ways that students learn.

1. Characteristics of an effective teacher
2. Motivating students to learn
3. Cognitive mapping

B. Lesson Planning

The beginning teacher and the experienced teacher need a refresher course in lesson planning. Too often the experienced teacher neglects the planning process.

1. Characteristics of an effective lesson
 2. Steps in planning a lesson
- C. Teaching Methods
- The process of choosing the best teaching method for a lesson and demonstrating the ability to use it are the aims of this section.
1. Selecting the teaching method for the lesson
 2. Factors that effect the teaching method
 3. Dale's Cone of Experience
 4. Teaching methods
 - a. general teaching methods
 - b. related teaching methods
 - c. shop and lab teaching methods
 5. Individualized instruction
- D. Teaching Techniques
- The development and refinement of teaching techniques is of vital importance to making a lesson effective. This section is designed to develop good teaching techniques.
1. The teacher's personality
 2. Communicative teaching
 3. Use of instructional aids
- E. Evaluating Teaching
- Without the ability to evaluate oneself little would be accomplished by this course. After finishing the course the teacher must be able to continue evaluating himself or herself in order to constantly improve and become an effective instructor.
1. Self evaluation of teaching methods and techniques.

STRATEGIES FOR TEACHING THE COURSE

The course suggested in this paper could be taught in two ways, depending on the degree of effective use of teaching methods and techniques the teacher is to develop.

A standard college classroom course could be developed to study the methods and techniques of teaching. The skills learned through a standard course would be less than if the course is taught in conjunction with actual experiences in the teacher's classroom.

The use of audio and visual equipment is a must in teaching the course. Their aid in teacher self-analysis would be in direct correlation to the effectiveness of the course.

If the course is to be offered on an individual basis the writer would suggest the use of the Performance-Based Teacher Education Modules, American Association for Vocational Instructional Materials, Athens,

Georgia. The modules offer one of the best sources of individualized instruction pertaining to this course.

EVALUATION STRATEGIES

If the suggested course is offered in the traditional college classroom setting, standard testing procedures would suffice for formative evaluation. However, if the course is offered with the benefit of actual teaching experiences and the use of audio and visual systems, each method and technique used by the teacher can be analyzed and evaluated by peers, the course instructor and the participating teacher. Being able to recognize one's own faults and positive assets is the best form of evaluation the course could provide.

Summative evaluation for the course should take place in the teacher's classroom. As the teacher analyzes and improves on the teaching methods and techniques the classroom atmosphere will improve along with student learning. Learning how to self-evaluate one's own teaching and improve the teaching process is the summative evaluation for this course.

TEACHER EDUCATION AND THIS COURSE

Where does a detailed course of teaching methods and techniques fit into the scope of teacher education? The writer sees the suggested course being offered to the trade and industrial teacher with one or more years of experience.

As explained in the introduction, the beginning teacher needs an opportunity to establish and improve his/her teaching methods and techniques. When hired, the vocational trade and industrial teacher is put through a rush survival course pertaining to the many things they will need upon entering the classroom. They are introduced to lesson planning, both related and manipulative. They are given the opportunity to teach a short lesson and offered constructive criticism to improve it.

During the first year of teaching they are given assistance by very able teacher educators. Their methods and techniques are discussed and improvement sought. The lack of sufficient time does not offer itself to developing a mastery of teaching methods and techniques.

After the first year the teacher is thrown head-on into the development of a course of study. Generally they have heard so much about the writing of the course of study that it is uppermost in their minds. The teacher is more worried about writing the course of study than developing and improving teaching methods and techniques.

Instructional strategies are required in the course of study. Some teachers list teaching methods that they never really use. Various reasons may be given why they are listed but not used. The two that best explain this situation are: one, a lack of working knowledge of a particular method

and, two, a lack of self confidence in trying a different method of teaching a particular lesson.

The suggestion here is for this course to be offered between the first and third year of teaching. It will provide the time and experience for the new teacher to develop the skills in various teaching methods and to develop the techniques of an effective teacher.

Another suggestion for establishment of this course in the teacher education process is to offer or require the experienced teacher who has taught for four or five years to complete the course for recertification. The reasoning here being that many teachers have not taken the initiative to work on their teaching methods and techniques and have established patterns with respect to the ones they use.

Few supervisors have the experience or training to suggest improvements in methods and techniques used by teachers as detailed in this course. When supervisors to evaluate the teaching process they are looking for many other items and do not or would not put the concentration on the areas stressed in this course.

The writer feels these reasons show a definite need for the establishment of this course in the teacher education process.

BIBLIOGRAPHY

- Baird, Ronald J. *Contemporary Industrial Teaching*. South Holland, Illinois: The Goodheart-Willcox Co., Inc., 1972.
- Cenci, Louis and Gilbert G. Weaver. *Applied Teaching Techniques*. Toronto: Pitman Publishing Corporation, 1960.
- _____ and Gilbert G. Weaver. *Teaching Occupational Skills*. 2nd ed. New York: Pitman Publishing Corporation, 1968.
- Coe, Burr D. *Teaching Related Subjects*. Albany, New York: Delmar Publishers, 1950.
- Harmer, Earl W. *Instructional Strategies for Student Teachers*. Belmont, California: Wadsworth Publishing Company, Inc., 1969.
- Kidd, Donald M. and Gerald B. Leighbody. *Methods of Teaching Shop and Related Subjects*. Albany, New York: Delmar Publishers, 1955.
- Miller, W. R. and Homer C. Rose. *Instructors and Their Jobs*. Chicago: American Technical Society, 1975.
- Pautler Jr., Albert J. *Shop and Laboratory Instructor's Handbook*. Boston: Allyn and Bacon, Inc., 1978.
- PBTE Modules, Section C. Athens, Georgia: American Association for Vocational Instructional Materials, 1978.
- Silvius, G. Harold and Estell H. Curry. *Teaching Successfully in Industrial Education*. Bloomington, Illinois: McKnight & McKnight, 1967.
- Staton, Thomas F. *How to Instruct Successfully*. New York: McGraw-Hill Book Company, Inc., 1960.
- Struck, F. Theodore, Ph.D. *Creative Teaching*. New York: John Wiley & Sons, Inc., 1951.

**TOPIC ANALYSIS FOR VOCATIONAL
TEACHER EDUCATION**

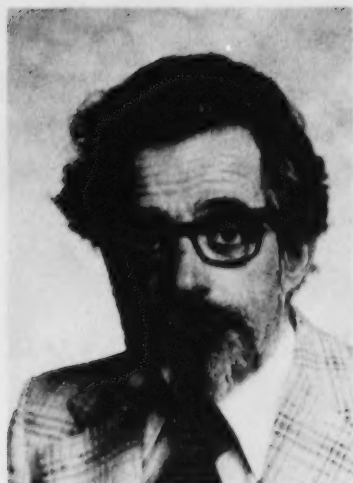
**EDUCATIONAL-INDUSTRIAL COORDINATION:
A DUAL APPROACH**

prepared by
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EDUCATIONAL — INDUSTRIAL COORDINATION; A DUAL APPROACH INTRODUCTION

This dual approach to Educational-Industrial Coordination resulted from the discussion and written comments that followed the presentation of the paper. The original paper did not seem to identify the specific audience it was designed to serve. As the writer and presenter this problem did not and does not present an obstacle in utilizing the course outline to meet the needs of the clientele to be served. My original concept was to cover the necessary elements in the coordination process, but yet keep it flexible enough that various institutions could utilize the suggested content to meet their needs and the needs of the clientele they serve.

With my basic concern being the continued growth and strengthening of cooperative education the following approach is recommended.

1. *Educational-Industrial Coordination: Phase I* The course outline for Phase I is suggested for training the individual who will be serving as a practicing teacher-coordinator. The two basic differences between Phase I and Phase II are the objectives and the areas of concentration.
2. *Educational-Industrial Coordination: Phase II* Phase II is designed to reach supervisors, guidance personnel and vocational administrators. It is hoped that one of the primary functions of Phase II would be to help bridge the gap that exists between the actual program operation and the administration by the local school agencies.

The strategies and evaluation techniques will be found at the end of the course outline for Phase II. It will be evident which strategies and evaluation techniques would be most applicable to phase one or two.

PHASE I — RATIONALE

A major reason for the growth of cooperative vocational education since 1970, other than increased funding, is the world of work involvement or the learn by doing concept that has many educational values which cannot be otherwise achieved. Well-prepared and able coordinators are the key to the successful merging of the world of work and the learn by doing concept. This course would be the vehicle in providing teacher-coordinators with the skills necessary to maintain the growth in vocational cooperative education.

It is the teacher-coordinator's function to organize and conduct a cooperative vocational education program. For example, the teacher-coordinator must disseminate information, select students, arrange for related classroom facilities, requisition teaching materials, survey and select training stations, place students at training stations, visit parents, develop training plans and follow-up graduates. For the program to be effective the

teacher coordinator needs the proper training which can be attained through this course.

The time and effort expended in manning cooperative vocational education positions is, without doubt, the most critical of all program activities. Also, in light of the dynamic nature of the program, it is highly essential that the teacher-coordinator should be well trained and continuously upgraded.

The completion of this course should be one requirement that a supervisor or an administrator should look for in hiring a teacher-coordinator. The success or failure of the program can depend on their selection of a teacher-coordinator.

Objectives of the Course

On completion of this course the student will be able to function in the areas of vocational cooperative education as covered in the course outline.

- 3.1 Synthesize the principles, methods, and problems of cooperative vocational education.
- 3.2 Describe the qualifications and competencies of a teacher-coordinator.
- 3.3 Comprehend the role of a teacher-coordinator in relation to the school, community and business and industry.
- 3.4 Perform the tasks of a teacher-coordinator to the satisfaction of the local education agency.
- 3.5 Apply various methods and techniques in organizing and articulating classroom instruction for the benefit of the student.
- 3.6 Formulate and practice the procedures for gaining cooperation between the student, parent, business and industry, community services and school personnel.
- 3.7 Analyze and locate training stations to suit the career goals of the student.
- 3.8 Develop and structure training plans that benefit both the employer and the student.

Suggested Course Outline

- 4.1 Purpose and principles of Cooperative Vocational Education
- 4.1.1 Types of cooperative education programs
 - 1.1 Work study
 - 1.1 Work experience
 - 1.1 Occupational training (Capstone)
- 4.1.2 Adult cooperative education programs
 - 1.2 Pre-employment
 - 1.2 Extension training

- 4.1.3 Cooperative programs for students with special needs
 - 1.3 Handicapped
 - 1.3 Disadvantaged
- 4.2 Teacher-Coordinator and Their Roles
 - 4.2.1. Explain teacher-coordinator qualifications and their needed competencies
 - 2.1 Certification qualifications
 - 2.1 Teaching competence
 - 2.1 Administration and supervision
 - 2.1 Coordination
 - 2.1 Promotional abilities
 - 4.2.2 Differentiate the teaching role
 - 2.2 Related technical instruction
 - 2.2 General related instruction
 - 2.2 Develop training sponsors
 - 4.2.3 Identify coordination role
 - 2.3 In-school responsibilities
 - 2.3 Out of school responsibilities
 - 4.2.4. Describe counseling and placement role
 - 2.4 Determine student needs
 - 2.4 Matching students to placement
 - 4.2.5 Formulate follow-up procedure
 - 2.5 Student follow-up
 - 2.5 Employer follow-up
 - 4.2.6. Establish youth leadership program
 - 2.6 Local relationship
 - 2.6 State relationship
 - 2.6 National relationship
- 4.3 Initiate the Cooperative Education Program
 - 4.3.1 Determine need for the program
 - 3.1 In the community
 - 3.1 In the school
 - 4.3.2 Organize program structure
 - 3.2 Relationship to total school program
 - 3.2 Scheduling of students
 - 3.2 Coordination schedule
 - 3.2 Visitation procedures
 - 4.3.3. Establish advisory committee
 - 3.3 Function of the committee
 - 3.3 Selection of the committee
 - 3.3 Meetings and agendas

- 4.3.4 Develop public relations program
 - 3.4 Public relations vehicles and techniques
 - 3.4 Types of publics
 - 3.4 Public relations calendar
 - 3.4 Approval for public relations policy
- 4.3.5 Formulate procedure for recruitment and selection of students
 - 3.5 Contact and inform students
 - 3.5 Contact various school personnel
 - 3.5 Interview students
 - 3.5 Compile student profile
- 4.4 Select Training Stations
 - 4.4.1 Identify selection criteria
 - 4.1 Attitude toward training
 - 4.1 Range of on-the-job experiences
 - 4.1 Equipment and facilities
 - 4.1 Location of the training station
 - 4.4.2. Locate training stations
 - 4.2 Advisory committee help
 - 4.2 Chamber of Commerce studies
 - 4.2 Telephone directory
 - 4.2 Community survey by coordinator
 - 4.4.3 Identify placement procedure
 - 4.3 Initial contact by teacher-coordinator
 - 4.3 Refer student(s) for interview
 - 4.3 Final decision by employer
 - 4.4.4. Develop training plans
 - 4.4 Consult with employers
 - 4.4 Define training objective
 - 4.4 Task analysis
 - 4.4 Published training plan
 - 4.4.5 Comprehend Federal and State employment regulations
 - 4.5 Age and schooling certificates
 - 4.5 Minimum wages
 - 4.5 Hazardous occupations
 - 4.4.6. Establish evaluation procedures
 - 4.6 Student progress
 - 4.6 Training station
- 4.5 Plan Effective In-School Instruction
 - 4.5.1 Determine what to teach in general related
 - 5.1 Organize instruction
 - 5.1 Purposes and values
 - 4.5.2. Select material for technical related study

- 5.2 Study guides
- 5.2 Employer suggestions for reference material
- 4.5.3 Formulate classroom teaching methods and techniques
 - 5.3 Classroom facilities
 - 5.3 Four-step teaching
 - 5.3 Supervised and directed study
- 4.5.4. Coordinate instruction between school and job training
 - 5.4 Observation on coordination visit
 - 5.4 Employer input
 - 5.4 Student input
 - 5.4 Periodic review of training plan
- 4.6 Cooperative Education by Services
 - 4.6.1 Agriculture
 - 4.6.2 Business and Office Education
 - 4.6.3 Distributive Education
 - 4.6.4 Home Economics Education
 - 4.6.5 Health Occupations
 - 4.6.6 Trade and Industrial Education

PHASE II — RATIONALE

Educators do not agree closely, or in detail, about what cooperative education is, should be, or can be. Their conceptions of it vary with the level to which it is applied, procedures in its operation, and the objectives sought. A closer relationship needs to be established between the teacher-coordinator, supervision and vocational administration to solve these disagreements. One step in solving this problem would be the requirement of this course of supervisors and vocational administrators.

There is a national trend for field based or experiential education that is neither directed nor supervised. Without program supervision or guidance, little education will take place. The risk for exploitation, as well as safety hazard problems, will be multiplied. A concerned administrator, with this course as a foundation, could effectively ward off the pressures for an "early release" program. The adoption of a sound cooperative education program would also be more beneficial and educationally sound than an "early release" program.

In *Cooperative Education: A Review*, Welch states:

Most research suggests many benefits attributed to the cooperative education approach. The results of most of the research presently in the literature strongly suggests that cooperative education is a viable approach for preparing people for the world of work. Most of the research concluded that cooperative education should be expanded in scope (including adults) and extended to more students. The National Association of Seco-

dary School Principals has recommended increased funding because of the benefits accrued to this approach. Federal funds have increased at the post secondary level, and the Education Amendments of 1976 have a potential for increased funds for cooperative education. The future looks very promising. (p. 64)

With a promising future it is necessary that vocational educators, including teachers involved in early placement, should gain a creditable concept of cooperative vocational education. This course can be the vehicle for vocational educators to achieve this concept whether it be preparatory or in-service.

In summary, it is important to the growth and improvement of cooperative vocational education programs that the principles and concepts be understood and practiced by those involved. This course can provide that information. Since vocational administrators control the destiny of cooperative vocational education the content of this course could provide the basis for them to make sound decisions in the organization and operation of cooperative vocational education programs. The course should also aid them in the selection of the teacher-coordinator.

Objectives of the Course

Careful study and participation of the student in this course should help to:

- 3.1 Synthesize the principles, methods and problems of cooperative vocational education.
- 3.2 Comprehend the role of a teacher-coordinator.
- 3.3 Interpret the tasks of a teacher-coordinator as they relate to program organization and operation.
- 3.4 Recognize the various methods and techniques in organizing and articulating classroom instruction for the benefit of the student.
- 3.5 Identify the procedures for cooperation between the student, parent, business and industry and school personnel.
- 3.6 Understand the need for the training stations to suit the needs of the student.

Suggested Course Outline

- 4.1 Purpose and Principles of Cooperative Vocational Education
 - 4.1.1. Work study
 - 4.1.2. Work experience
 - 4.1.3. Occupational training (Capstone)
 - 4.1.4 Students with special needs
 - 4.1.5 Adult cooperative programs
- 4.2 Teacher-Coordinator and Their Roles

- 4.2.1 Explain teacher-coordinator qualifications and their needed competencies
- 4.2.2 Differentiate the teaching role
- 4.2.3 Identify coordination role
- 4.2.4 Describe counseling and placement role
- 4.2.5 Formulate follow-up procedure
- 4.2.6 Establish youth leadership program
- 4.3 Initiate the Cooperative Education Program
 - 4.3.1 Determine the need of the program
 - 4.3.2 Organize program structure
 - 4.3.3 Establish advisory committee
 - 4.3.4 Develop public relations program
 - 4.3.5 Formulate procedure for recruitment and selection of students
- 4.4 Select training stations
 - 4.4.1 Identify selection criteria
 - 4.4.2 Locate training stations
 - 4.4.3 Identify placement procedure
 - 4.4.4 Develop training plans
 - 4.4.5 Comprehend Federal and State employment regulations
 - 4.4.6 Establish evaluation procedures
 - 4.4.7 Establish visitation procedures
- 4.5 Plan effective in-school instruction
 - 4.5.1 Determine what to teach in general related
 - 4.5.2 Select material for technical related study
 - 4.5.3 Formulate classroom teaching methods and techniques
 - 4.5.4 Coordinate instruction between school and job training through visitations
- 4.6 Cooperative education by services
 - 4.6.1 Agriculture
 - 4.6.2 Business and Office Education
 - 4.6.3 Distributive Education
 - 4.6.4 Home Economics Education
 - 4.6.5 Health Occupations
 - 4.6.6 Trade and Industrial Education

INSTRUCTIONAL STRATEGIES

- 5.1 Instructional strategies will vary on whether this course is offered as a course under typical classroom conditions or as an in-service program where the teacher-coordinator is employed. The following suggested strategies are primarily mentioned for the classroom setting.
 - 5.1.1. The "Glen Oaks Simulation" can be used in whole or part to achieve the stated objectives through the in-basket correspondence and the various scripts.
 - 5.1.2. Breaking the class into small groups or teams to synthesize the philosophy of cooperative vocational education into a presentation that can be used for program development.
 - 5.1.3. Careful selection of a practicing coordinator to review with the class on how he/she utilizes the many roles of the teacher-coordinator and the method used on the local level for performance evaluation.
 - 5.1.4. Directed group discussion for determining the methods and techniques for effective classroom instruction.
 - 5.1.5. Role playing in the analyzation and location of training stations.
 - 5.1.6. Presentation of problems that will face the teacher-coordinator for discussion and listing of possible solutions.

EVALUATION STRATEGIES

- 6.1 Formative evaluation can be achieved by the development or selection of guidelines that will be used by the teacher-coordinator for the program operation. The quality and quantity of these guidelines to be determined by the course instructor.
- 6.2 The compilation of all previous accepted guidelines into a teacher-coordinator's program guide will form the basis of the summative evaluation. A review of the guide by the instructor will determine if the student has met, and to what degree, the course objectives.

TEXTS AND SPECIAL REFERENCES

- 7.1 Mitchell, E. F. *Cooperative Vocational Education: Principles, Methods and Problems*. Allyn and Bacon, Inc., Boston, Massachusetts 02210, 1977.
- 7.2 Stadt, Ronald W. and Gooch, Bill G. *Cooperative Education: Vocational, Occupational and Career*. The Bobbs-Merrill Company, Inc., Indianapolis, Indiana 46268, 1977.
- 7.3 Mason, R. E. and Haines, P. G. *Cooperative Occupational Education and Work Experience in the Curriculum*. The Interstate Printers and Publishers, Inc., Danville, Illinois 61832, 1972.
- 7.4 Meyer, W. G., Crawford, Lucy and Kolaurens, Mary K. *Coordination in Cooperative Vocational Education*. Charles E. Merrill Publishing Company, Columbus, Ohio 43210, 1975.
- 7.5 *Coordination of Cooperative Education: Professional Teacher Education Module Series, Category J*. American Association for Vocational Instructional Materials, University of Georgia, Athens, Georgia 30602, 1978.
- 7.6 "The Glen Oaks Simulation." The Center for Vocational Education, 1960 Kenny Road, Columbus, Ohio 43210, 1974.
- 7.7 Welch, Frederick G. *Cooperative Education: A Review*. The Center for Vocational Education, The Ohio State University, 1960 Kenny Road, Columbus, Ohio 43210, 1977.
- 7.8 *A Guide for Cooperative Vocational Education*. University of Minnesota, Minneapolis, Minnesota, 1969.
- 7.9 *Guidelines in Cooperative Education: Interrelated Education Experiences*. The Center for Vocational Education, Columbus, Ohio, 1967.

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1978**

**“Development of Common Core Curriculum for
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